"PATENT"

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of:	§	BEFORE THE OFFICE ACTION:
Chung, et al.	§	Roberto Robago, Ph.D.
Serial No.: 10/539,014	§	Group Art Unit No.: 1713
Filed: June 16, 2005	§	Attorney Docket No.: 2003B133D
For: Halogenated Polymers with	§	Confirmation No.: 7413
New Sequence Distributions	§	
Customer No.: 23455	§	December 7, 2006

Assistant Commissioner of Patents and Trademarks
Washington, D.C. 20231

DECLARATION OF DR. T. D. SHAFFER UNDER 37 CFR § 1.132

Dear Sir:

I, T. D. Shaffer, hereby declare that:

1. I am a citizen of the United States of America and a resident of the City of Hackettstown, NJ. I am one of the inventors of the subject matter described and claimed in the above-identified patent application.

2. I was awarded a Ph.D. degree in Macromolecular Science from Case Western Reserve University in May of 1986. Since March of 1991 have been continuously employed as a chemist by ExxonMobil Chemical Company conducting research and development work concerning butyl polymer. During this time, I have specifically worked on developing a copolymer composition comprising an isoolefin and a multiolefin described and claimed in the above-identified patent application.

3. Under my supervision and control, I provided the data for the examples disclosed in Table 26 of the application which is replicated below.

Table 26 (disclosed in the application as filed)

Example	Diluent	Yield wt.%	Mol% pMS	% BSB	m	T (°C)
149	CH_3Cl	95.4 41.9 80.7 12.4 9.5	2.02 4.18 9.65 16.6 23.3	45.1 33.1 22.3 13.8 9.36	40	-95
150	CH_2FCF_3	93.0 73.1 39.8 32.2 55.6	1.89 4.95 7.60 9.75 16.2	58.6 40.6 32.5 28.0 16.4	29	-95
151	CH_3CHF_2	82.9 51.0 72.4 60.9 63.5 76.3	1.63 4.08 6.53 9.41 14.9 19.7	44.7 28.2 23.1 16.1 11.4 7.53	58	-95
152	CH_3Cl	100 100 100 100 100	2.3 4.0 9.4 12.8	46.6 34.8 21.8 15.1	42	-80
153	CH_2FCF_3	100 100 100 100 100	2.1 4.2 6.6 8.6 11.9	53.5 37.3 28.2 26.9 18.2	35	-80
154	CH_3CHF_2	100 100 100 100 100	2.2 4.1 6.7 9.2 12.6	43.9 28.9 20.0 15.1 12.6	58	-80

4. The Mol% Alkylstyrene disclosed in the Table 26 was experimentally determined. The parameter "A" is the molar ratio of Alkylstyrene to Isoolefin in the copolymer, which can be calculated easily based on the following formula:

A= mol% Alkylstyrene /(100 - mol% Alkylstyrene).

Therefore, parameter "A" was inherently disclosed in the application as filed.

5. The parameter "m" can be calculated easily by mathematically solving the equation (which was disclosed in the application as filed):

$$F = 1 - \{m A / (1 + mA)\}$$

Times (1 + mA) on both side of the "=": $F(1 + mA) = (1+mA) - mA$

Rearrange the equation: $FmA = 1 - F$

Then: $m = (1 - F)/(FA)$

Therefore, parameter "m" was inherently disclosed in the application as filed for every example in Table 26.

6. Applicant submits the following Table 26 which is essentially identical to Table 26 in the application. The new Table 26 includes both parameter "A" and "m" calculated according to the method as stated in this declaration.

Table 26

Example	Diluent	Yield wt.%	Mol% pMS	% BSB	m	T (°C)
149	CH_3Cl	95.4 41.9 80.7 12.4 9.5	2.02 4.18 9.65 16.6 23.3	45.1 33.1 22.3 13.8 9.36	59 46 33 31 32	-95
150	CH_2FCF_3	93.0 73.1 39.8 32.2 55.6	1.89 4.95 7.60 9.75 16.2	58.6 40.6 32.5 28.0 16.4	37 28 25 24 26	-95
151	CH_3CHF_2	82.9 51.0 72.4 60.9 63.5 76.3	1.63 4.08 6.53 9.41 14.9 19.7	44.7 28.2 23.1 16.1 11.4 7.53	75 60 48 50 44 50	-95
152	CH_3Cl	100 100 100 100 100	2.3 4.0 9.4 12.8	46.6 34.8 21.8 15.1	49 45 35 38	-80
153	CH_2FCF_3	100 100 100 100 100	2.1 4.2 6.6 8.6 11.9	53.5 37.3 28.2 26.9 18.2	41 38 36 29 33	-80
154	CH_3CHF_2	100 100	2.2 4.1	43.9 28.9	57 58	-80

		100 100 100	6.7 9.2 12.6	20.0 15.1 12.6	56 55 48	

7. I hereby declare that all statements made herein of my own knowledge are true, and that all statements made on information and belief are believed to be true, and further that these statements are made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both, under Section 1001 of Title 18 of the United States Code, and that such willful false statements may jeopardize the validity of the application of any patent issuing thereon.

Date 12/7/06

Dr. T. D. Shaffer